

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-15 (Canceled)

16. (Previously Presented) An isolated proton-gated cation channel comprising a subunit which comprises the amino acid sequence of SEQ ID NO: 2.

17. (Previously Presented) A channel according to claim 16, which is a homopolymeric channel.

18. (Previously Presented) A channel according to claim 16 which is a heteropolymeric channel.

19. (Previously Presented) A channel according to claim 18 comprising at least one subunit which belongs to the degenerin/ENaC channel superfamily.

20. (Previously Presented) A channel according to claim 18, comprising at least one subunit which belongs to the P2X ATP-gated channel family.

21. (Previously Presented) A channel according to claim 20, wherein the P2X family subunit is P2X2.

Claims 22-40 (Cancelled)

41. (Previously Presented) An isolated subunit of a human proton-gated cation channel, wherein the subunit comprises the amino acid sequence of SEQ ID NO: 2.

Claim 42 (Canceled)

43. (Previously Presented) An isolated subunit of a human proton-gated cation channel, wherein the subunit consists essentially of the amino acid sequence of SEQ ID NO: 2.

Claim 44 (Canceled)

45. (New) An isolated proton-gated cation channel comprising a subunit which consists essentially of the amino acid sequence of SEQ ID NO: 2.

46. (New) An isolated subunit of a proton-gated cation channel comprising a subunit which comprises an amino acid sequence consisting essentially of the amino acid sequence of SEQ ID NO: 2.